



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

gus (*jabot*). The intestine proper is only a fœcal reservoir. The urinary or Malpighian tubes sometimes secrete calculi. No bile has been found in the secretions of these tubes. A point of great importance is touched upon by the author, namely: the passage of the chyle from the stomach to the blood. It is well known that there are in Articulates no lacteals as in Vertebrates to effect this process. Plateau states that the products of digestion pass through the walls of the digestive canal by an osmotic action and directly mingle with the blood.

HORN Y CREST ON THE MANDIBLE OF THE FEMALE WHITE PELICAN AS WELL AS THE MALE.—In all the standard works on the Birds of North America, it is stated that the horny crest or "button" on the upper mandible of the white pelican (*Pelecanus erythrorhynchus*) is exclusively a male appendage. I dissected, April 20th, 1875, an *adult female* of this species whose ovaries contained eggs in all stages of development. This bird was in full plumage, having the feathers of the head and breast conspicuously elongated and also having a *full-sized horny "button" on the upper mandible*.—F. H. SNOW, *Lawrence, Kansas*.

THE WESTERN NONPAREIL IN MICHIGAN.—On the 15th day of May last, Dr. H. A. Atkins of Locke, Ingham Co., Mich., shot and sent me a fine specimen, male, of *Cyanospiza versicolor*, which I have mounted and have now in my collection. Baird, Brewer, and Ridgway's "North American Birds" contains the following note on this species: "This beautiful species has only doubtful claims to a place in our fauna. It is a Mexican species and may occasionally cross into our territory. It was met with at Boquillo, in the Mexican state of New Leon by Lieutenant Couch. It was procured at Guatemala by Dr. Van Patten and by Salvin, and is given by Bonaparte as from Peru. It is also found at Cape St. Lucas, where it is not rare, and where it breeds."

It was shot in the vicinity of some Indigo birds, *C. cyanea*, on the first day of their appearance in this locality.—J. M. B. SILL, *Detroit, Mich.*

MICROSCOPY.

A NEW WARM STAGE FOR THE MICROSCOPE.—Prof. E. A. Schafer of University College, London, finding the warm stages already

in use, such as Stricker's, described by Klein in Sanderson's Hand Book, to be clumsy and difficult to manage with precision, has contrived an apparatus which is moderately easy to prepare and use, and extremely precise in its results. It consists essentially of three parts, the stage, the hot-water reservoir, and the gas regulator.

The stage is a hollow brass-box, closed at every point except an inlet pipe at one end and an outlet pipe at the other. Through the centre of the stage is an opening or centre chamber for the transmission of light through the object. This chamber is closed above and below with cover-glasses, upon the upper of which the object rests. It communicates with the external air by a horizontal tubular opening through which a thermometer may be introduced to test temperature, or tubes for the introduction of gases or other reagents, but has no communication with the general cavity of the stage.

The reservoir consists of a vertical brass cylinder, containing hot water, which is heated by a gas flame below. From the top of this reservoir the hot water passes with a slight ascent through a flexible rubber tube to one end of the stage, through the length of the stage and back by a descending course through a rubber tube to the bottom of the reservoir. This is a closed circuit entirely filled with water, the hot water rising on one side and the cooled water falling on the other, precisely as the water pipes in the kitchen stove or range heat the copper boiler which supplies the hot water pipes of our houses. The reservoir is made hollow for the reception of the gas regulator.

The gas regulator is not unlike a thermometer with the top of the tube broken off. A steel tube with a narrow slit in one side is cemented tightly into the top of the glass tube of the regulator, and delivers the gas inside of the glass tube and some distance below its upper end. The glass tube has a side opening above the level of the bottom of the steel tube, from which the gas is carried by a flexible tube to the burner beneath the reservoir. The regulator is filled with mercury which, when the required temperature has been attained, is adjusted so as to just touch the bottom of the steel tube, the flame below the reservoir being only preserved by the gas which escapes through the slit in the steel tube, but the

least decrease in temperature allowing the mercury to fall and the more freely escaping gas to increase the flame. The adjustment of the mercury to the exact height required is accomplished by a screw which works through a steel collar on the side of the glass tube and which by working in or out gives the requisite change of capacity to the reservoir. This adjusting screw is the most difficult part of the apparatus for construction by an amateur, and may be omitted, the adjustment being accomplished by sliding the steel tube up or down until its lower end just touches the mercury after the desired temperature has been reached, in which case it, of course, is not cemented into the glass tube but made to slide into it through an air-tight packing. The proximity of the objective probably reduces somewhat the temperature of the object, and if great exactness is essential, an additional current of hot water may be carried through a flexible tube which is coiled around the objective. The apparatus is described and figured in the "Quarterly Journal of Microscopical Science."

COX'S TURNTABLE.—Miller Bros. of New York have made an improved form of this excellent contrivance, which is marked by its handsome iron stand and its careful adjustment of the centring movements. If the real convenience of this table were known its use would soon become general.

NOTES.

MESSRS. HENRY HOLT & Co., New York, will publish in January "Life-Histories of Animals, including Man," by A. S. Packard, Jr., containing the papers which have appeared during the past year in the NATURALIST, with additional chapters and some changes and additions.

NOTICE TO SUBSCRIBERS.

As announced in our last number, the *American Naturalist* will, after this issue, be published by Messrs. H. O. Houghton & Co., of Boston, Mass., the former proprietors having dissolved partnership. It will hereafter be edited by A. S. Packard, Jr., with the assistance of eminent men of science.

It is hoped that, from the substantial interest taken in the conduct of the magazine by kind friends, a new lease of life awaits it.

Much more matter, equivalent to over fifty pages, due to the increased size of the page, will be put in the next volume, and